**Content 51**

### Virtual Functions in C++

In previous content we had seen that, If we create any base pointer and point with the address of derived class object then we can not access to derived class because the address remains to only with base class.

Now here we will we will do it successfully with the help of virtual keyword and making the function virtual function to access the function and methods of derived class by pointing the object of derived class by pointer of base class and making the function as an Virtual Function.

#include <iostream>

using namespace std;

class base

{

public:

    int var\_base = 8;

    virtual void display(void)

    {

        cout << "~~~~Here We are in base class~~~~~" << endl;

        cout << "The value of var\_base: " << var\_base << endl;

    }

};

class derived : public base

{

public:

    int var\_derived = 45;

    void display(void)

    {

        cout << "~~~~~~~~~Here We are in Derived class~~~~~~" << endl;

        cout << "The value of var\_base: " << var\_base << endl;

        cout << "The Value of varr\_derived: " << var\_derived << endl;

    }

};

int main()

{   base  \*base\_pointer;

    derived obj1;

    base\_pointer=&obj1;

    // pointer\_base->display(); // it willl throw an error becoz virtual function is not made.

    //after adding virtual function in base class.

    base\_pointer->display();

    return 0;

}

**Output:**

~~~~~~~~~Here We are in Derived class~~~~~~

The value of var\_base: 8

The Value of varr\_derived: 45